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Michael Rodriguez

University of Connecticut, michael.a.rodriguez@uconn.edu

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Chapter 10

Technology Triage*

Assessing and Managing Library Systems and Projects

Michael Rodriguez

University of Connecticut

Introduction

Assessing, prioritizing, and managing library technologies are daunting challenges—and essential skills—for librarians at small or isolated academic institutions. Whereas larger libraries are more likely to have the financial assets and specialized staff to innovate or outsource technology services, small academic libraries are more likely to subsist on shoestring operating budgets and employ jack-of-all-trades professionals rather than specialized technical experts. This is particularly the case with community colleges or private universities lacking large endowments or other reliable revenue flows. The latest data from the National Center for Education Statistics (NCES) supports these claims, with over half of academic libraries (2,023) spending under \$500,000 per year. At least half these

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budgets went to salaries and benefits, leaving little funding for technology or specialized staff. Of all academic libraries, 2,496 counted as small by NCES standards, reporting a full-time equivalent (FTE) enrollment under 2,999. Of those libraries, 1,388 served fewer than one thousand students.¹ This is a vast pool of libraries for which highly functional, user-friendly technologies can be at once essential and unaffordable.

The library technology manager's role is widely acknowledged as "one of the most challenging aspects of service management in a small library."² Technological stagnation is commonplace in many libraries. Particularly in small or rural libraries, lowered funding for improvements and staffing means technology managers often find themselves working solo. Moreover, librarians working in small or rural environments may undertake major, vital projects without a budget, support staff, or prior experience. In addition to learning how to manage workflows and concurrent projects, these librarians must obtain buy-in from coworkers and stakeholders, develop support networks beyond physically isolated rural workplaces, and learn from their mistakes. Above all, professionals who embrace tech-heavy roles must be ready to teach themselves the process of *technology triage*: how to identify, prioritize, and implement critical technological enhancements. Technology triage requires assessing priorities, executing improvements rapidly, and proceeding to other areas of need. These skills are essential for technology managers to master.

Definitions

As concept and praxis, medical triage is transferrable to technology management in libraries. According to the *Oxford English Dictionary*, *triage* denotes "the assignment of degrees of urgency to wounds or illnesses in order to decide the order or suitability of treatment."³ In medical triage, health-care personnel assess the severity of injury to each patient and prioritize seriously wounded but viable patients over fatally injured patients, who will die regardless of treatment, and over lightly injured patients, who need minimal care. Patients are color-coded according to condition: black for fatally injured or deceased patients who are beyond help, red for immediate life-saving care, yellow for urgent care, and green for the walking wounded.⁴ Some classification systems

add a fifth category: white for patients with minor injuries. Triage is used in mass-casualty situations and is practiced at all levels of medical authority, from physicians to paramedics.⁵

While life and limb are rarely at stake in the library context, the application of triage underscores the importance of assessing and managing priorities in environments where resources are limited and outcomes are significant. *Merriam-Webster's Collegiate Dictionary* offers an alternative, nonmedical definition of *triage* as “the assigning of priority order to projects on the basis of where funds and other resources can be best used, are most needed, or are most likely to achieve success.”⁶ In context, this can refer to assessing and prioritizing technological improvements based partially on the severity or urgency of the situation and its impact on customers. Table 10.1 gives a comparison of triage applications in medical and technological contexts. Regardless of the context, fundamental to triage is the core consideration of resources expended in relation to benefits achieved. At the heart of triage is cost-benefit analysis, better known as return on investment (ROI).

TABLE 10.1 Triage codes				
Type	Medical	Technological	Examples	Characterizations
Black	Deceased or fatally injured	Cease support and replace	Web application platform, intranet	System no longer viable—consider replacing
Red	Urgent, life-saving care	Prioritize the life cycle	Library website, documentation	Improvement vital to library services
Yellow	Urgent, non-critical care	Salvage and sustain	Knowledge base, discovery layer	Malfunctioning is significant but still at acceptable level
Green	The walking wounded	Monitor	Library services platform	Operating normally but inefficiently
White	No need for treatment	Benign neglect	Library study room booking system	Operating normally and effectively

This chapter seeks to fill a gap in the literature by highlighting how the methodological framework of triage can offer a new way to understand and apply best practices in technology management at small or rural academic libraries. This approach is grounded in comparative analysis and a literature review. Using the author's institution as a case study, this chapter explores how to thrive as a library technology field surgeon by implementing cost-effective, user-centered solutions in small academic libraries.

Literature Review

Triage in LIS

In LIS literature, the concept of triage appears within the context of reference and general management but almost never in the context of managing library technologies. Searches for *technology triage* and *triage* in Google Scholar, WorldCat, Scopus, ERIC, LISTA, and other databases produced few results—and almost none relevant to library technology management.⁷ Researchers have used the term to refer to routing virtual reference queries efficiently or creating instant messaging services to automate responses to student questions.⁸ Other authors have used *triage* to identify an emerging practice in which paraprofessional staff handles directional and other basic reference transactions.⁹ Brown explained how to optimize workflows using triage management generalizations of “can wait,” “hopeless,” and “urgent,” which tends to reduce triage to a triumvirate of absolutes instead of a series of contingencies, for which the methodology is designed.¹⁰ Hennen used the term to comment on budget cuts—a perennial concern for libraries but not a technology-specific one.¹¹ Finally, a twenty-five-year-old *Library Journal* article discussed triage management but used a humorous case study of red ant invasions at its author's library—also a scenario distinct from technology management.¹² Many other works offer starting points for librarians who manage information technology (IT) or would like to explore the triage framework. See Appendix 10A for a listing of additional resources.

Triage in Management and IT

The concept of triage figures largely in business management and information technology literature. Management researchers invoke the

concept of triage to improve profitability, whether by assessing products, grasping project requirements, or improving environmental sustainability.¹³ IT researchers use the term in reference to developing more efficient processes for tasks such as sorting e-mails (*e-mail triage*), troubleshooting software applications (*bug triage*), or processing large volumes of data or documents (*information triage* or *document triage*).¹⁴ Harper and Bechhofer used *semantics-based triage* to mean stripping unnecessary data from websites to improve accessibility for visually impaired users.¹⁵ Other authors have used *triage* to mean prioritizing IT support requests not only according to urgency but also according to how efficiently the problem can be resolved. The literature shows that the nonmedical usage of triage is variously defined, creating space for another effective adaptation of the methodology: in support of limited staffing and resources at small and rural academic libraries.

Hodges University and McMahan Library

Hodges University

With 2,000 full-time equivalent (FTE) students, Hodges University is a private, nonprofit institution located in southwest Florida. It offers thirty-eight degree programs, concentrated in business, technology, and health care, with a mixture of online and on-campus offerings. Hodges serves mostly nontraditional students who tend to remain local after graduation. Following rapid growth in the period of the Great Recession (c. 2007–2009), Hodges, like many community colleges and universities, experienced a sharp post-2011 drop in enrollment. Experts have attributed this decline to adult learners pursuing jobs amid an economic recovery instead of returning to school.¹⁶ At Hodges, declining enrollment resulted in tighter finances and layoffs, leading to neglect of library technologies. A new library director sought to reenergize the library and grow its impact on student success and retention, achieved partly through technological innovation.

McMahan Library

As of 2016, Hodges University's Terry P. McMahan Library employs four faculty librarians and one library assistant, runs on the OCLC WorldShare Management Services platform, hosts its website using the LibGuides

content management system (CMS), and spends about one-quarter of its pared-down budget on electronic serials and other online services and resources. As Hodges University's web services librarian starting in summer 2014, the author inherited an obsolescent website, an inadequately maintained intranet, virtually nonexistent documentation and workflows, few technical skills among staff, a fraught relationship with the Hodges IT department, and no funds for improvement. This array of responsibilities and challenges was overwhelming, and applying the triage methodology helped to identify, organize, and manage projects and workflows.

Applying Triage at McMahan Library

Priority Assessment

An essential feature of triage is its adaptability, as practitioners must reassess and modify triage placement as needs and priorities evolve. Triage's adaptability establishes it to be not a measurement technique but rather a framework to help conceptualize and implement a pragmatic, results-oriented approach to library technology management.¹⁷ Triage is not just a stopgap measure—it is essential to developing better services and systems. How librarians apply triage should be contingent on local needs and resources, which vary widely across the thousands of small and rural academic libraries nationwide. Librarians should prioritize assessing the needs of local stakeholders, whether through observation and informal discussions with faculty and students or through structured interviews, surveys, or focus groups. Projects should be triaged at least partly according to these assessments. Recognizing that the process of triage should be adjusted to each library's internal and external operating environments and user needs, the rest of this chapter will discuss how technology priorities were assessed and ranked according to urgency of need, costs, and efficiency of implementation at the McMahan Library. (See Appendix 10B for criteria for cost-benefit analysis to use when triaging technologies.)

Code Black

Literature warns health-care providers against wasting vital time and resources on patients with little to no chance of survival.¹⁸ Similarly, librarians should not waste customizations on Code Black systems; rath-

er, those systems should be replaced and technical support provided only to minimize service gaps until the new systems come online. User needs are particularly important when assessing usability and impact of online services and resources—often users' first point of contact with the library. The McMahan Library's website was dysfunctional to the point of Code Black (see figure 10.1).

The previous McMahan Library website was built piecemeal using the Microsoft SharePoint and Springshare LibGuides v1 platforms. Neither platform was responsive to mobile devices, visually appealing, or user-friendly. Also, the university's IT department controlled the library website, locking access to the site behind a login and locking down permissions so the librarians could not make meaningful interface changes. Exacerbating the site's obsolescence and inaccessibility was library staff's initial decision to continue working with the existing web platforms rather than adopting a new content management system. This led to staff expending a significant number of hours in unproductive effort. The low capacity for improvement of the original website platforms should have been quickly assessed; had this been done, less effort would have been dedicated to improving them. Readers should recognize, however, that palliative care is essential to prolonging the life cycle of the product until staff can implement a replacement system. Quick transitions are risky and unrealistic, as IT project management literature notes.¹⁹

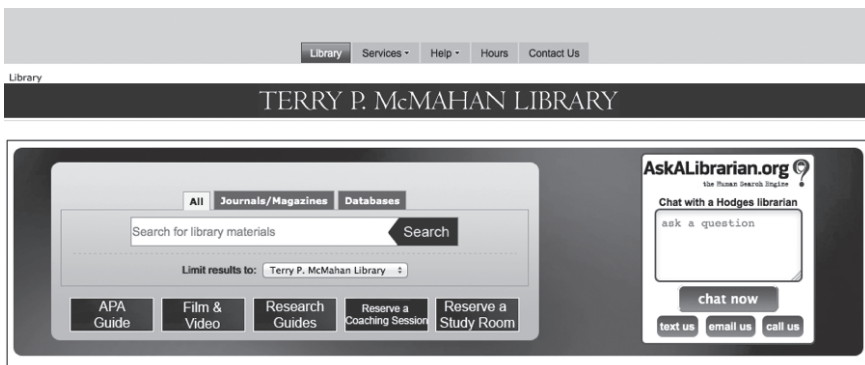
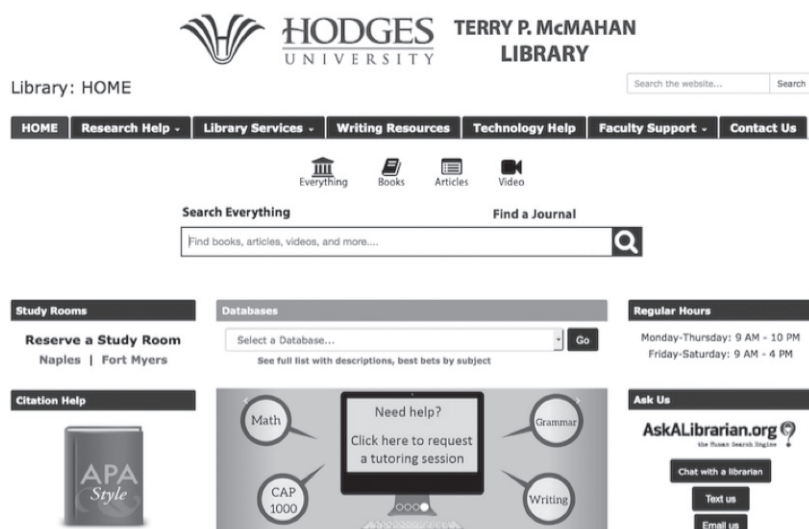


FIGURE 10.1

Screenshot of Hodges University's Terry P. McMahan Library homepage (pre-triage, 2014).

**FIGURE 10.2**

Screenshot of Hodges University's Terry P. McMahan Library homepage (post-triage, 2016).

Replacement was the best call. Springshare was offering a major product upgrade at no additional cost, so the McMahan Library decided to merge its two web platforms into one site using LibGuides CMS v2. The library adopted an agile approach, migrating the website from a defective CMS and making iterative improvements over the following year, from designing a mobile responsive discovery search box to coding new virtual reference widgets. The library now manages a user-friendly, visually attractive, unified interface optimized for mobile devices (see figure 10.2). The initial migration, however, upgraded the status of the website from Code Black to Code Red—improved, but still needing help.

Code Red

Code Red characterizes digital systems and resources that are essential to library operations but are in acute need of improvement. Library websites frequently fall into this category because they deliver essential services but are not necessarily easy for users to navigate to find what they need.²⁰ The website is where students and faculty often

initiate their interaction with the library—users are lost or captured at the homepage. According to a 2015 Pew Research Center Report, 22 percent of people over the age of 16 have used a library website in the past year, 50 percent of whom used a tablet or smartphone to access the site.²¹ A user-friendly, resource-rich, mobile-friendly website is an essential front-facing service for any organization. Once McMahan Library transitioned to the latest version of LibGuides, the library's website downgraded to a Code Red priority as staff performed usability testing and customized search boxes and other features. After a year of work, the site had moved up to Code Green, rapidly approaching the stage of benign neglect. Between Code Red and Code Green, however, the triage method posts Code Yellow.

Code Yellow

In technology triage, Code Yellow systems are not upgraded until technologists can deal with immediate priorities (Code Red). Illustrating Code Yellow are McMahan Library's knowledge base and discovery layer search, which experienced inconsistent link resolution requiring constant maintenance. Ideally, discovery layers facilitate access; instead, McMahan Library users all too often encountered error messages when trying to access a resource. Librarians traditionally worked around these failed searches by training researchers to go directly to the databases. Since users had been trained to avoid using the discovery search, library staff agreed not to prioritize repairing the knowledge base and discovery layer because the coping mechanism was already in place, and knowledge base cleanup would require massive investment of staff time. Librarians continued to perform routine maintenance—deleting lapsed subscriptions from the knowledge base and investigating reports of inaccurately resolving links—but overall, staff elected not to invest significant effort into replacing or revamping the system. Nevertheless, link resolution improved because of better reporting and maintenance by the vendor.

Code Green

Code Green involves stabilizing and monitoring triaged systems so that they continue to function, even if below peak efficiency. For instance,

McMahan Library's library services platform (LSP) had poor usability and limited functionality, to the point that staff had to pull usage reports via clumsy file transfer protocol (FTP). However, the platform is economical and handles the core functions of circulation, cataloging, and interlibrary loan perfectly. At McMahan Library, triage assessment led to a decision not to work on the LSP until the website and other top priorities had been addressed. In this instance, enhancements were pushed back for a year with few associated complaints from end users, as the LSP limitations impacted staff workflows only. Commonly categorized as Code Green are nonessential software updates, major customizations, and inventory.

Code White

For technologies that exhibit no signs of impending obsolescence, the preferable course of action is often benign neglect. Let the system run itself while staff focuses on higher-order priorities. To illustrate a typical Code White situation, McMahan Library used an event and room management system that also offered survey forms, a personal scheduler with Google and Microsoft Outlook integrations, and other attractive special features. However, the library never sought to implement these features, as study room reservations were the only function needed by stakeholders. Vindicating Code White status, the room booking component took only ten minutes per year to maintain.

Priorities and Best Practices

Prioritize Relationships

Libraries at smaller colleges and universities might be highly interdependent with, if not dependent on, other university departments. For instance, the university's finance department might review purchases and handle payments for equipment or software, information technology maintain library hardware, and online learning facilitate integration of library resources into the college's learning management system. With this interplay in mind, library technologists should prioritize developing or repairing useful or complementary relationships with stakeholders inside the larger organization. Developing interdepartmental relationships is a priority for effective

technology triage, if only because technologists must gain the cooperation of these departments to get invoices paid, learning objects embedded, and computers operational. Librarians should work to strengthen existing relationships or improve any troubled relationships they may inherit.

For library technologists, the single most important interdepartmental relationship is usually with the university's IT department. Librarians can often improve or strengthen that relationship simply by expressing empathy and respect for IT personnel and priorities and writing friendly help tickets that always end in thank-yous.²² Common courtesy and empathy build camaraderie and help to smooth over any past conflicts.²³ Additionally, demonstrating high personal levels of technological competency, following up assertively on lagging issues, and personalizing professional relationships will also command respect for the librarian tasked with technology management. At small and rural libraries, whose staff may have limited technology skills, librarians should seek out opportunities to learn from IT colleagues and take advantage of professional development webinars, workshops, and readings (see Appendix 10A) as opportunities present themselves. The key takeaway is that library technology managers should see IT and other departments as internal customers, with needs and priorities as important as those of the library, faculty, or students.

Prioritize Internal Customers

The importance of internal service applies to library staff also. Albrecht defined internal service as “the idea that the whole organization must serve those who serve.”²⁴ When internal service is valued and a positive work environment developed, employees are better able to perform triage effectively, which in turn leads to improved services for external customers. For example, clear and consistent expectations regarding information security and privacy frees staff to focus on implementing enhancements and fixes without fretting about accidentally flouting policy.²⁵ Essentially, library technologists must find answers to a deceptively simple question: What will optimize staff performance to the point that the needs and expectations of users are consistently surpassed?

Prioritize Efficiency via Documentation

Documentation is key to internal service and triage implementation. Library staff can spend an inordinate length of time on chat or e-mail determining why a particular user is having difficulty accessing an electronic resource. Logins can fail for any number of reasons, from a mistyped password to a firewall that blocks authentication. At McMahan Library, such situations could snowball to the point of the entire staff getting involved in one technical support issue. This was largely because the staff members who initially tried to help had no troubleshooting documentation or workflows for guidance. Lack of documentation leads to duplication of effort, poorly served constituents, inefficiency, and frustration.

Documentation of workflows, policies, logins, and procedures is the simplest and most effective way to improve efficiency *and* internal service. Among the first initiatives at McMahan was to produce detailed, step-by-step documentation for troubleshooting all points of resource access. The documentation was made public on the library website so library users could troubleshoot their own issues, reducing callbacks by 90 percent. These documentation measures also relieved pressure on staff attempting to deliver on-the-fly technical support, as well as reducing dependence on specialized technologists. To further support in-depth troubleshooting, a master password list and a vendor contact list were created. Documenting procedures and cross-training staff on how to access and use the documentation are essential to enabling library technology triage on the front lines.

Prioritize Documentation to Train Staff

To facilitate triaging, frontline staff should be empowered to troubleshoot and enhance library technologies independently, without relying totally on an in-house expert. Lack of professional development is common in small and rural academic libraries given the lack of resources and opportunities;²⁶ however, documentation can help bridge this gap by encouraging continuous learning and building cross-training into expectations for all staff. Reframed as a method of professional development, documentation offers high ROI for all stakeholders, empowering staff to exercise autonomy in troubleshooting common maintenance and access issues. In addition to developing staff skills,

documentation frees library technology managers to focus on high-order concerns and long-range planning.

Discussion

Triage is integral to long-range planning because it enables library technology managers to determine the order in which systems need to be replaced or upgraded and plan budgets accordingly. Financial and strategic planning, along with investments in sound technological infrastructure, support triage. Failure to plan ahead leads to frequent system failures, slower machines, and other frustrations. This results in heavier staff workloads and poor user experiences. In the long run, poor infrastructure investment is more expensive than up-front costs to maintain and upgrade that infrastructure.²⁷ To implement triage effectively, library managers must monitor technology life cycles and track inventory to anticipate the costs of upgrading obsolescent systems and services.

Technology triage is uniquely suitable for the small or rural library environment because it is scalable, flexible, and appropriate for adaptation to any project or work environment, by solo librarians or by teams. Whereas project management methods are optimal for team environments with a number of collaborators and specialists, triage is ideal for small organizations or solo practitioners because, unlike Gantt charts or the Scrum methodology, triage is less a rigorous, team-based methodology than a conceptual (and visual) framework into which to fit and formulate diverse needs and projects.

Notwithstanding these benefits, triage implementation poses challenges, including the need for frequent reassessment, the limitations of a five-category framework, and the loosely structured nature of triage-based workflows. Librarians may wish to develop additional color-coded triage categories to ensure maximum flexibility and scalability when sorting priorities. Another common challenge is stakeholders' reluctance to black-code a system. This reluctance requires librarians to evaluate triage decisions carefully, sell those decisions to stakeholders and administrators, and be self-critical and flexible in potentially reevaluating those decisions. During implementation, unexpected situations may arise that require lower-level priorities to be rapidly prioritized. For instance, while executing minor modifications to a webpage,

a buggy line of code may crash the entire website and escalate a maintenance situation (Code Green) to a top priority (Code Red).

Overall, the flexibility of technology triage is key, and it is this characteristic that most benefits small and rural academic libraries. The method is straightforward yet adaptable—just what a low-budgeted, understaffed organization needs.

Conclusion

Technology triage is more than an emergency technique for repairing systems or squashing bugs—it is a conceptual and methodological framework that enables librarians to optimize technology management based on cost-benefit analysis. In technology triage, the primary consideration is ROI—how should the library technology manager allocate scarce staff, time, and resources as efficiently as possible to obtain the best overall results for both staff and end users? Triage ROI should be calculated according to how each technology impacts stakeholders' ability to accomplish their work or academic goals. Pragmatic and results-oriented, triage enables library technology managers to assess, prioritize, and manage technology repairs and enhancements in the high-stakes, low-budget environments of many small or rural academic libraries.

Appendix 10A: Resources for Library Technology Management

Publications

- Bolan, Kimberly, and Robert Cullin. *Technology Made Simple: An Improvement Guide for Small and Medium Libraries*. Chicago: American Library Association, 2007.
- Breeding, Marshall. "Professional Development for the Library Technologist." *Computers in Libraries* 30, no. 4 (May 2010): 30–32.
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- Houghton-Jan, Sarah. *Technology Training in Libraries*. New York: Neal-Schuman, 2010.
- Library Technology Reports*. Chicago: ALA TechSource, 2001–.
- Thompson, Susan M. *Core Technology Competencies for Librarians and Library Staff: A LITA Guide*. New York: Neal-Schuman, 2009.

Online Training

- Library and Information Technology Association (LITA). "Online Learning." <http://www.ala.org/lita/learning/online>.
- Library Juice Academy. "Courses." <http://libraryjuiceacademy.com/courses.php>.
- Webjunction. "Find Training." <https://www.webjunction.org/find-training.html>.

Appendix 10B: Sorting Technology Triage Priorities through Cost-Benefit Analysis

Cost-Benefit Analysis	Considerations	Questions
Cost	Time to plan, implement, and sustain project	<i>How many work hours will project implementation take? How long overall will it take to complete the project? How much maintenance will it require?</i>
	Budget to implement and sustain project	<i>What resources need to be allocated to the project? What risks are incurred if costs exceed projections? What resources may need to be diverted from other projects? How might reallocation impact services?</i>
	Skills to implement and sustain project	<i>Does staff have the skills needed to implement the project? Will they need to learn new skills or systems, adding to project duration and cost? Will managers need to recruit new personnel or rewrite job descriptions?</i>
Benefit	Need for new or improved systems or services	<i>How urgently do external and/or internal customers need the new or improved service or system? Is the need real or just assumed? Is the decision data-driven? Are existing systems adequate? For how long?</i>
	Need for improved perceptions	<i>Does the institution have a forward-thinking tech reputation to sustain, or a negative one to overcome? Would community perceptions demonstrably improve due to the project?</i>
	Benefits, including potential benefits, of implementation	<i>How immediately, tangibly, and significantly will the technology benefit internal and external customers? What about potential? Note: Need is distinct from benefit, as users frequently do not realize the benefits of new systems or workflows until after the fact.</i>
Analysis	Return on investment (ROI)	<i>How can the library technology manager use scarce resources as efficiently as possible to obtain the best overall results for users?</i>

Notes

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Big Ideas, Small Libraries

Being Innovative

Creating Innovative Tutorials

Ustadza Ely

Yavapai College

YAVAPAI COLLEGE (YC) IS a community college with six campuses throughout Yavapai County in Arizona. YC offers various associate's degree programs, including unique offerings such as gunsmithing. Twenty-two percent of our students make use of YC's online classes, which allows them to obtain an education when they are unable to travel or if it interferes with their work schedule. The college even offers discounted child-care services (3 months–5 years) on the main campus.

The YC Library is located on the main campus in Prescott, and there is a branch in Clarkdale. Librarians are able to travel to serve students on the smaller campuses, and Ask A Librarian services are also offered via chat, phone, and e-mail. Additionally, pathfinders created in LibGuides are available so students have a starting point for research that is accessible anytime—a far cry from the eighties, when YC Library's materials had to be strapped to a horse for an eight-mile trip down into a remote canyon village.

Why did the Yavapai College Prescott Campus Library begin to create online video tutorials?

Ustadza Ely: The creation of online tutorials was triggered by a desire to promote our resources and services in a fun and different way to reach out to students. Armed only with a video camera and Windows Movie Maker, my coworker James Rider and I made a vintage video called “An Afternoon Romp” to showcase our DVD collection. Short-

ly after that we created “Thrall & Zorga in ...Let’s Ask A Librarian,” which won a Bronze Telly Award for Online Video. These videos were placed on YouTube and embedded on our library website. Later on I made an interactive video tutorial on how to use the catalog. Characters from the popular game *World of Warcraft* were incorporated and quizzes—with a creature attacking if you got the answer wrong—were scattered throughout. Eventually, the Library Instruction and Library Technology team were tapped to participate in creating a video tutorial on plagiarism. This tutorial is very popular: YouTube hits for this video alone come to over 20,000 views as of 2016.

How do online video tutorials support your students?

Ustadza: The video tutorials we create are beautiful visual presentations that capture the student’s attention. They support the needs of distance education students by being available 24/7 online. The videos also appeal to those with short attention spans since they explain research concepts or provide library technology support in a brief amount of time.

A mark of your tutorials is creativity and innovation—how do you support and encourage this at a small academic library?

Ustadza: We encourage professional development and exploration. The more knowledgeable our staff are, the better we can serve our students. When a staff member shows an interest in learning a new type of technology or teaching tool, they are assigned a library project that requires them to put their training into practice. Luckily, our staff are all a very curious bunch who love to grow and hardly need any encouragement to explore.

How do you access professional development opportunities and hone your technology skills?

Ustadza: We make use of the free trainings provided by the Arizona State Library, books available at our library, YouTube tutorials, as well as Yavapai College courses. Our staff also seek training opportunities in-house since we know the technology strengths of the

people in our department. We have created in-house tutorials for staff using the screen-capturing software Camtasia.

Time is an essential resource for librarians at small and rural academic libraries. How do you and your staff manage time to create online tutorials?

Ustadza: We use our staff talent efficiently. A project may require Adobe After Effects, Photoshop, Illustrator, acting, etc. We distribute the workload and assign tasks to the person whose strengths are in that area. This means that a few librarians may work on the script, while another figures out how to visually present the content, and a paraprofessional may work on editing the images or film. It requires a lot of communication since there are many cooks in the kitchen, but because the workload is spread out, we are still able to continue working on other projects.

We always have a library manager in charge of the project to make sure everyone is getting the support they need to complete their task. When things get hectic, we may double up and work on a project while on the reference desk or use flex time. We always find a way to complete the project in a timely manner.

How do you leverage your budget to obtain technology tools? Do you have any creative low-cost solutions?

Ustadza: We are fortunate that we can use the software made available to students in art, computer, and filmmaking classes. Early on, we made sure we invested in good tools that would have a long life span. We have artists and crafters in our department, so we have made costumes for the videos and created the props ourselves with things from home and bargain bins in stores. Once, we even had the college orchestra create and record music for one of our videos so that we did not have to purchase music rights.

What are some of the biggest challenges you face in the creation and distribution of online tutorials?

Ustadza: Finding new and unique ways to present the information

and choosing which service to highlight is always a challenge. We always want to do more, but must find balance with our other duties. With regard to distribution, we are constantly trying to find different ways to reach out to faculty. It can be difficult since so much information is being thrown at faculty. Using LibGuides has definitely helped us to share these resources at the students' point of need.

What advice do you have for other small and rural academic libraries that want to create innovative online tutorials?

Ustadza: Start small. You do not have to make a full-length feature film for your first tutorial. Choose a topic that can give you a lot of bang for your buck and will create that "Ah-ha!" moment for students. Also, you can never do enough storyboarding. The more you plan, the less you will have to redo. And remember, this is fun!

What is the future of online tutorials at your library?

Ustadza: They will continue to grow. Distance education at YC is booming, and students are constantly on the lookout to get information faster and have it stick. We will strive to find new ways to give the students the tools they need to succeed.

